

# Exhibit M

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

SECURITIES AND EXCHANGE COMMISSION,

Plaintiff,

v.

RIPPLE LABS INC., BRADLEY GARLINGHOUSE, and  
CHRISTIAN A. LARSEN,

Defendants.

20-cv-10832 (AT)

**Expert Report of Prof. Carol Osler**

## **I. Background and Qualifications**

1. I am the Martin and Ahuva Gross Professor of Financial Markets and Institutions at Brandeis University. My Curriculum Vitae is included as Exhibit A to this report.
2. I have earned an MA and Ph.D. in Economics, with specialization in International Finance, from Princeton University. That was preceded by a BA in Economics from Swarthmore College. At Brandeis I usually teach about 125 master's students and supervise one or two Ph.D. theses each year. Prior to teaching at Brandeis, I taught at Dartmouth's Amos Tuck School of Business, Northwestern University's Kellogg School of Management, Columbia University's Economics Department and, separately, its School for International and Public Affairs. I have also taught a Ph.D. course at the Norwegian Business School (BI).
3. At Tuck and Kellogg I taught an MBA course entitled "International Capital Markets," in which foreign exchange ("FX") markets naturally occupied some weeks. At Brandeis I teach a master's-level course on financial markets. At its inception the course was called "Foreign Exchange," and it was entirely dedicated to exchange rates and currency trading. Over the years I added substantial material on equity, bond, and commodity markets, so the course title was changed to "Trading and Exchanges."
4. My research primarily focuses on currency markets and exchange rates, about which I have published roughly twenty papers. All but two of these appeared in A-rated journals, according to the well-regarded Australian Business Deans Council ("ABDC") ranking. Five of my research articles were published by the ABDC's highest quality (A\*) journals including the *Journal of Finance*, the *Journal of Financial and Quantitative Analysis*, and the *Review of Finance*.
5. I have been retained by Kellogg, Hansen, Todd, Figel & Frederick, PLLC, counsel to Defendant Ripple Labs Inc. ("Ripple"), to offer my expert opinions in this case. I am being compensated at the rate of \$600 per hour for my work on this matter. My compensation is not dependent upon the outcome of this case, and all of the opinions I express in this report are my own. The materials I have relied on and considered in forming my opinions are cited throughout this report.

## II. Expert Assignment and Opinions

6. I have been asked to offer an expert opinion on the following questions

Q1. From an economic perspective, does the digital asset XRP function as a “currency”?

Q2. Does Ripple’s On-Demand Liquidity product (“ODL”) present an economically sound option for making cross-border and cross currency payments? Why or why not?

7. For reasons described in greater detail below, my opinions on these questions are as follows:

Q1. XRP fits the economic definition of a “currency” because it has the functions and attributes commonly assigned to currencies by experts.

- Functions: XRP serves as a medium of exchange, means of payment, unit of account, and store of value.
- Attributes: XRP is durable, portable, divisible, uniform, acceptable, in limited supply, and inexpensive to store.

Q2. ODL, which operates using the open-source XRP Ledger system and leverages the digital asset XRP as a bridge currency, presents an economically sound option for making cross-border and cross-currency payments.

- Compared to the dominant traditional payments platforms, ODL provides less costly, faster, and more transparent payments.
- Compared to the dominant cryptocurrency ledger systems, the XRP Ledger is faster, less costly, equally transparent, more scalable, and less resource-intensive.
- The XRP Ledger, which ODL leverages, not only realizes the advantages of digital technologies but advances them by implementing original solutions to well-known challenges in computer science.
- XRP is a logical part of its eponymous Ledger system. It embodies a centuries-old solution for limiting the unmanageably extreme multiplicity of connections among currencies.
- The dominant payment platforms have not fully incorporated the potential advantages of digital technologies. Furthermore, the modernization process is proceeding slowly in part because the dominant payment processors have both the incentives and the power to maintain high costs.
- Ripple faces specific, well-known challenges as a start-up. The dominant firms in its industry benefit from “network externalities” that create barriers to entry.
- Ripple follows a strategy known as “disruptive innovation” in promoting its ODL system. According to economists, this strategy is appropriate for a firm, like Ripple, which has technological advantages but financial disadvantages relative to the dominant firms.